

Application No.: 09/287,500
Amendment dated April 19, 2004
In response to Examiner's Office Action dated November 17, 2003

AMENDMENTS TO THE CLAIMS

Please amend claims 69, 106, 108-110, 112, 114, 116-118
and 120-121.

Please cancel claims 107 and 111.

This Listing of Claims will replace all prior versions,
and listings, of claims in this application.

Listing of Claims

Claims 1-68 (previously canceled).

Claim 69 (currently amended): A method for inducing
~~local~~ tissue formation at a locus accessible to at least one
progenitor cell of a mammal, wherein the tissue is selected from
the group consisting of bone, cartilage, tendon/ligament and
neural tissue, from a progenitor cell in a mammal comprising the
step of implanting ~~in the mammal~~ a morphogenic device ~~at a locus~~
~~accessible to at least one progenitor cell of the mammal~~, whereby
the morphogenic device induces ~~local~~ tissue formation from the
progenitor cell in the mammal, the morphogenic device comprising:

a) an implantable biocompatible carrier,

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b) a morphogenic protein comprising a polypeptide
selected from the group consisting of BMP-4, BMP-5, BMP-6, BMP-7
(OP-1), BMP-8, BMP-9, BMP-10, BMP-11, BMP-12, BMP-13, Dpp, Vg-1,
COP-5 and COP-7 disposed in the carrier, the morphogenic protein
capable of inducing tissue formation when accessible to the
progenitor cell, and

c) a morphogenic protein stimulatory factor (MPSF)
selected from the group consisting of IGF-I, hydrocortisone,
insulin and parathyroid hormone, wherein said MPSF is disposed in
the carrier, and wherein said MPSF is at a concentration
effective to synergistically stimulate the ability of the
morphogenic protein to induce tissue formation from the
progenitor cell.

Claim 70 (withdrawn): The method according to claim 69,
wherein the locus is a jaw bone for use in periodontal or dental
reconstructive procedures.

Claim 71 (previously presented): The method according
to claim 69, wherein the locus is a bone defect selected from the
group consisting of a fracture, a non-union fracture, a fusion
and a bony void.

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Claim 72 (withdrawn): The method according to claim 69, wherein the locus is a joint for use in cartilage and soft tissue repair.

Claim 73 (withdrawn): The method according to claim 69, wherein the locus is nervous system-associated tissue for use in neural regeneration and repair.

Claims 74-101 (canceled).

Claim 102 (previously presented): The method according to claim 69, wherein the carrier comprises heparin or a salt thereof.

Claims 103-105 (canceled).

Claim 106 (currently amended): The method according to claim ~~67~~69, wherein the morphogenic protein comprises a pair of subunits disulfide bonded to produce a dimeric species ~~and wherein at least one of the subunits comprises a polypeptide belonging to the BMP protein family.~~

Claim 107 (canceled).

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Claim 108 (currently amended): The method according to claim ~~107~~69, wherein the ~~osteogenic~~ morphogenic protein is capable of inducing the progenitor cell to form endochondral or intramembranous bone.

Claim 109 (currently amended): The method according to claim ~~107~~69, wherein the ~~osteogenic~~ morphogenic protein is capable of inducing the progenitor cell to form cartilage.

Claim 110 (currently amended): The method according to claim 69, wherein the morphogenic protein is capable of inducing the progenitor cell to form ~~tendon/ligament-like~~ tendon/ligament tissue or ~~neural-like~~ neural tissue.

Claim 111 (canceled).

Claim 112 (currently amended): The method according to claim 69, wherein the morphogenic protein comprises a polypeptide selected from the group consisting of BMP-7 (OP-1), ~~BMP-2,~~ BMP-4 and BMP-6.

Claim 113 (previously presented): The method according to claim 69, wherein the morphogenic protein comprises BMP-7 (OP-1).

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Claim 114 (currently amended): The method according to claim 106, wherein the dimeric species is a homo- or hetero-dimer comprising at least one ~~BMP-2 or~~ BMP-7 (OP-1) subunit.

Claim 115 (previously presented): The method according to claim 69, wherein the morphogenic protein stimulatory factor is IGF-I.

Claim 116 (currently amended): The method according to claim 69, wherein the morphogenic protein is present in ~~the~~ a pharmaceutical composition at a concentration of at least about 1 ng/ml, and the morphogenic protein stimulatory factor is present in the pharmaceutical composition at a concentration of at least about 0.01 ng/ml.

Claim 117 (currently amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in ~~the~~ a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is IGF-I and is present in the pharmaceutical composition at a concentration of from about 0.1 ng/ml to about 50 ng/ml.

Claim 118 (currently amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in ~~the~~ a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is hydrocortisone and is present in the pharmaceutical composition at a concentration of from about 0.05 nM to about 5.0 nM.

Claim 119 (withdrawn): The method according to claim 118, wherein BMP-7 (OP-1) is about 200 ng/ml and hydrocortisone is about 0.5 - 5.0 nM.

Claim 120 (currently amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in ~~the~~ a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is insulin and is present in the pharmaceutical composition at a concentration of from about 0.01 nM to about 1000 nM.

Claim 121 (currently amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in ~~the~~ a pharmaceutical composition at a concentration of

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from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is parathyroid hormone and is present in the pharmaceutical composition at a concentration of from about 10 nM to about 1000 nM.

Claim 122 (withdrawn): The method according to claim 121, wherein BMP-7 (OP-1) is about 200 ng/ml and parathyroid hormone is about 25-200 nM.